

657240 20296260

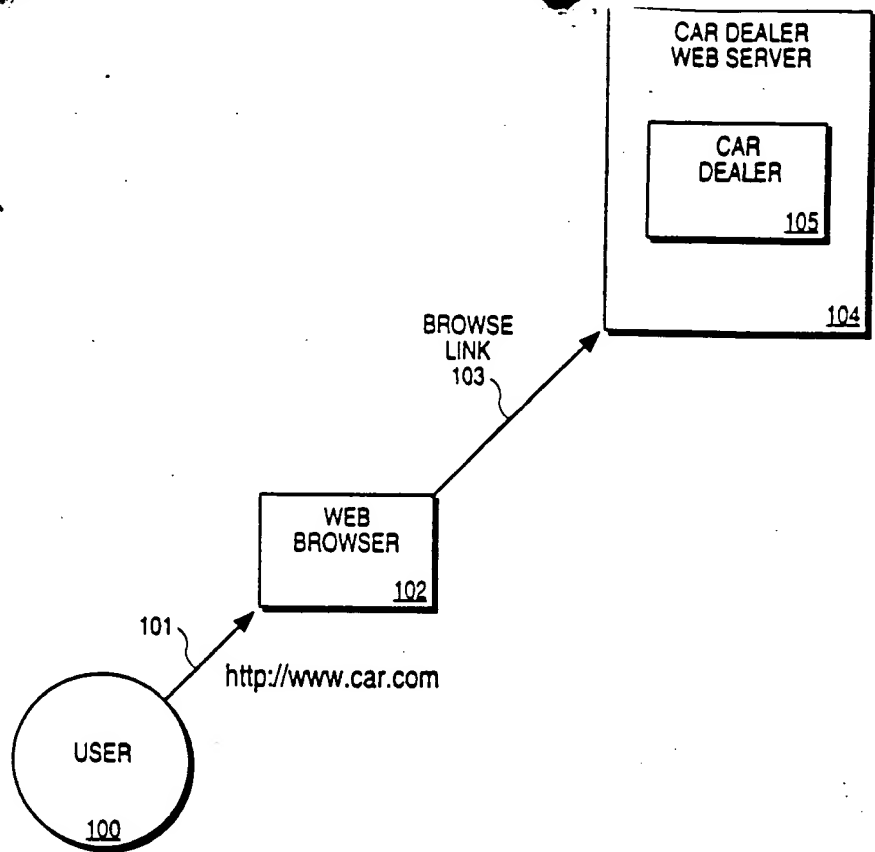


FIG. 1A (PRIOR ART)

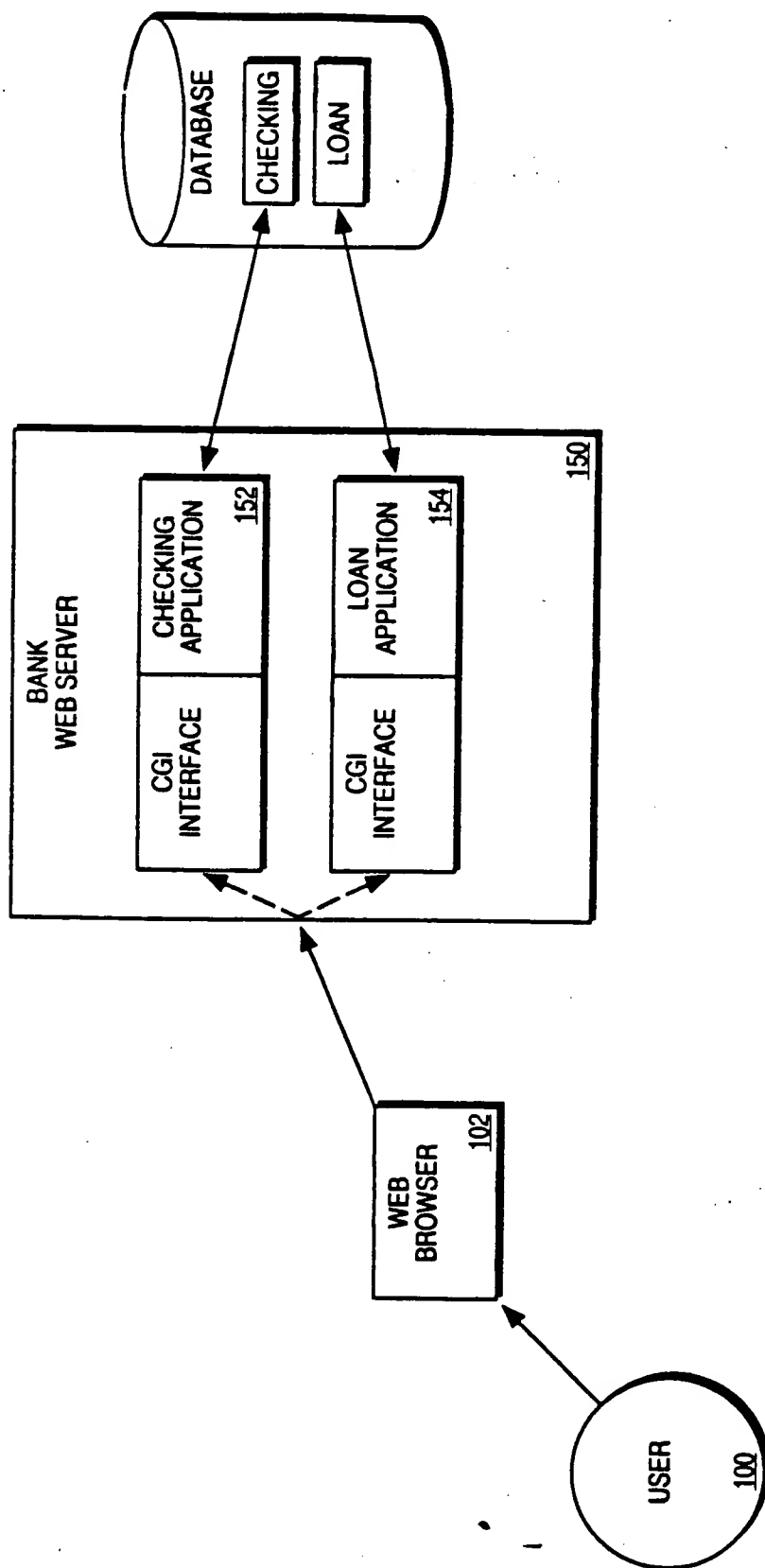


FIG. 1B (PRIOR ART)

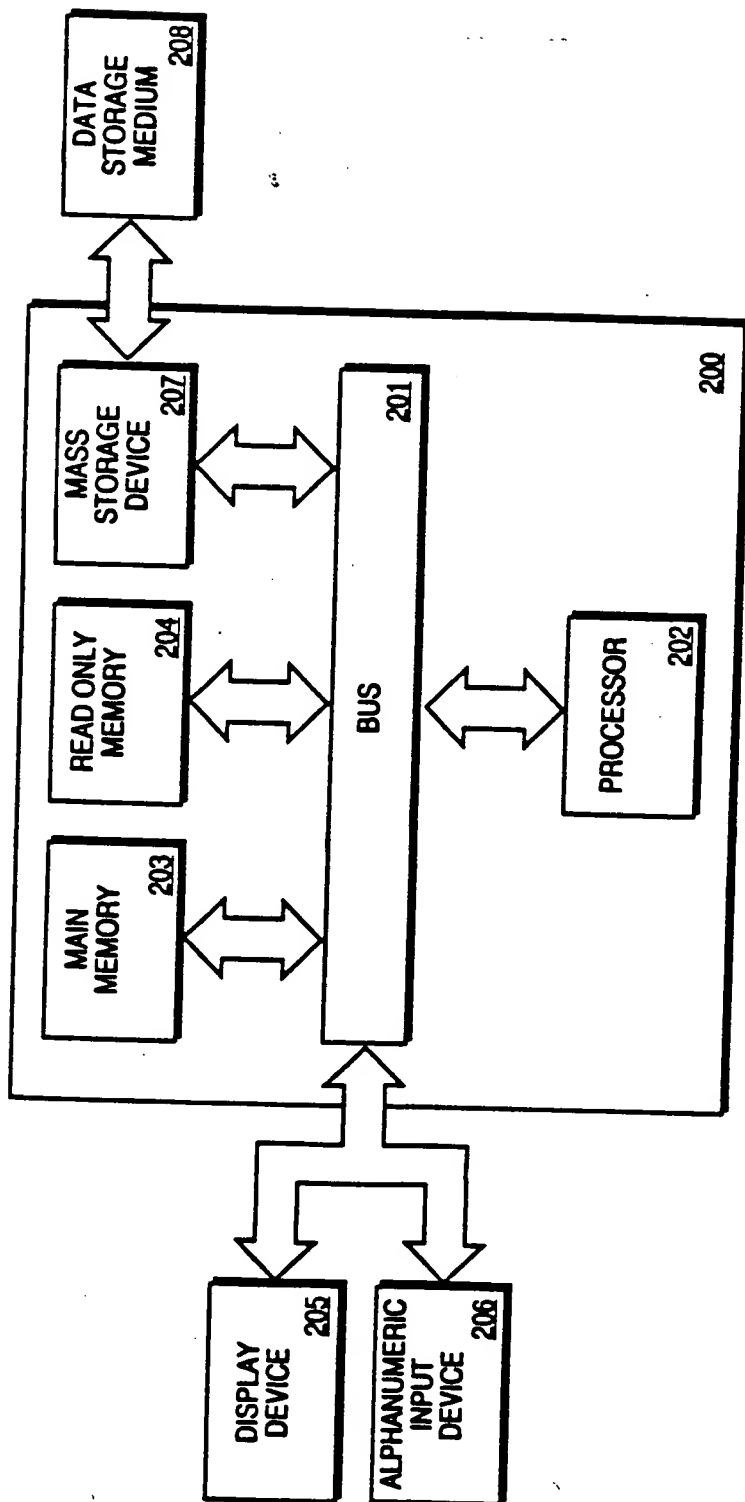


FIG. 2

OSI MODEL
300

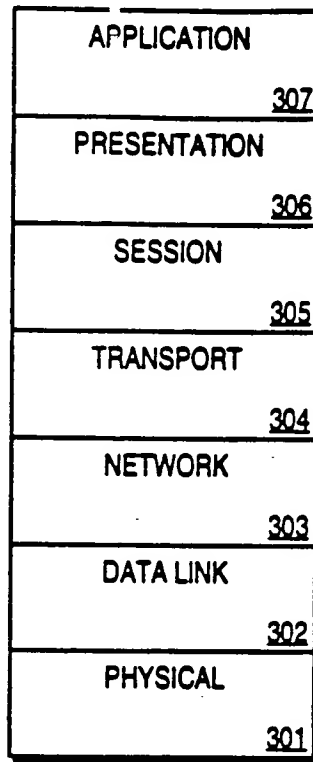


FIG. 3

00296207.042199

65T240" 20296260

SERVICE CHANNELS

BACK OFFICE

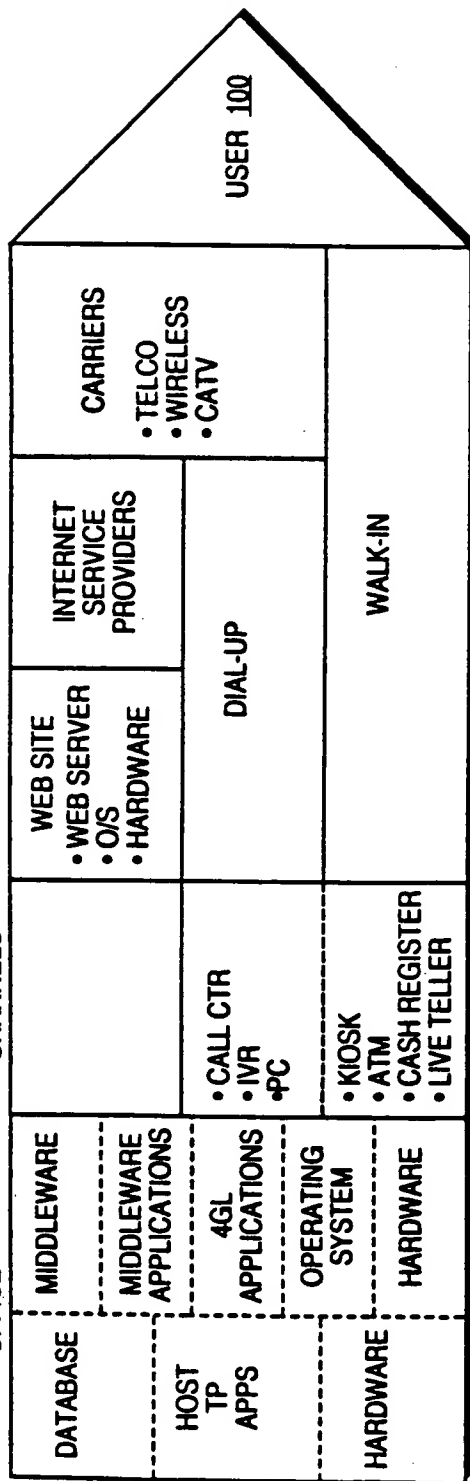


FIG. 4A

SERVICE CHANNELS

BACK OFFICE

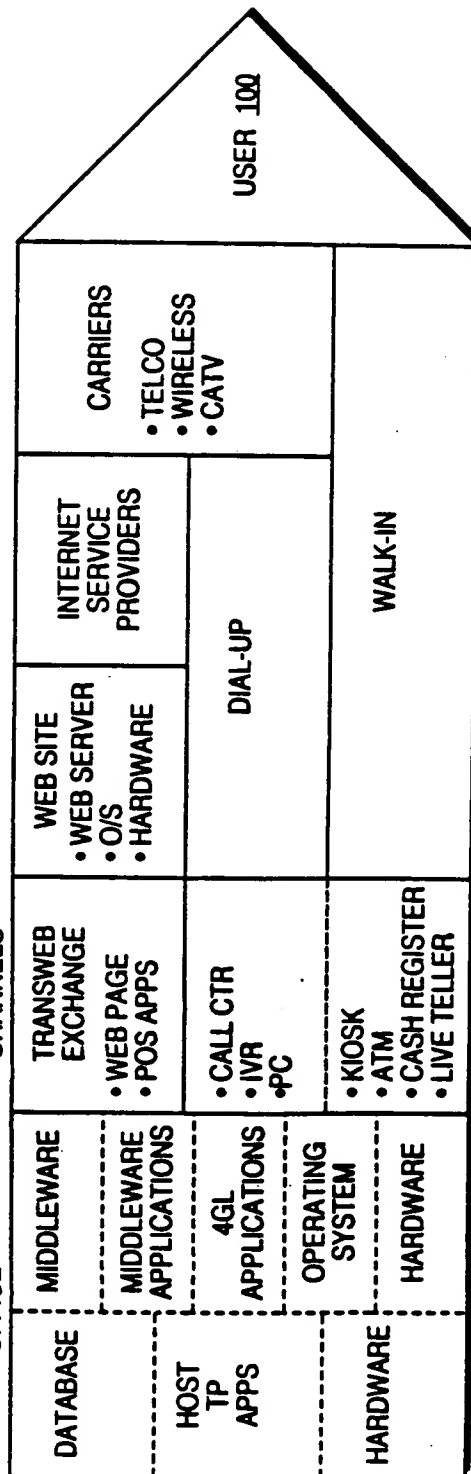


FIG. 4B

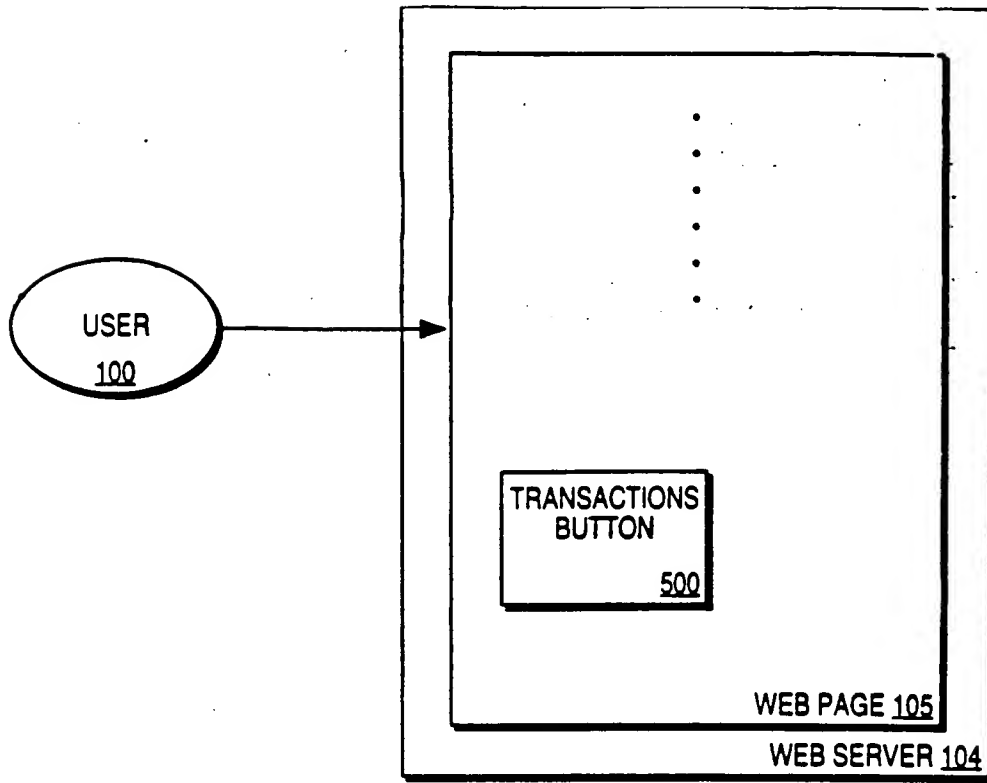


FIG. 5A

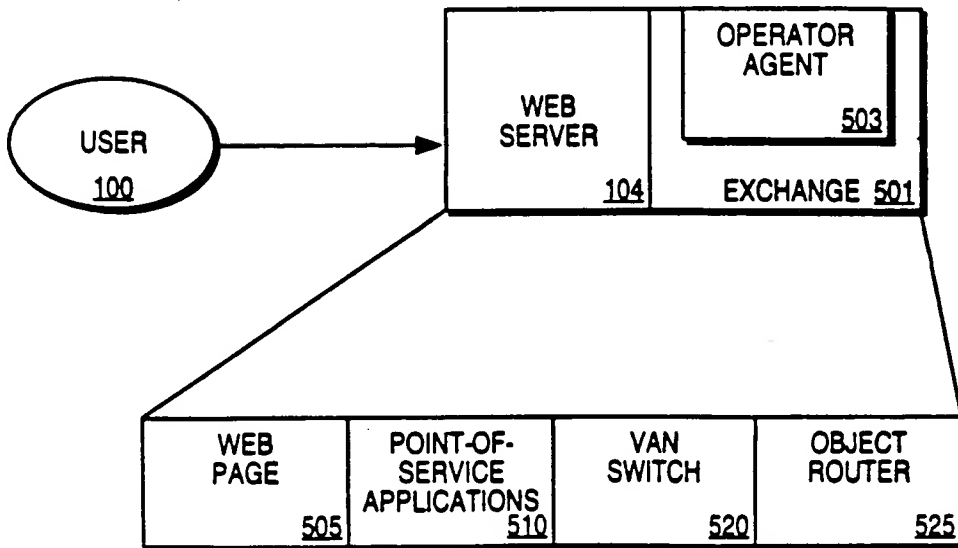


FIG. 5B

09296207 042499

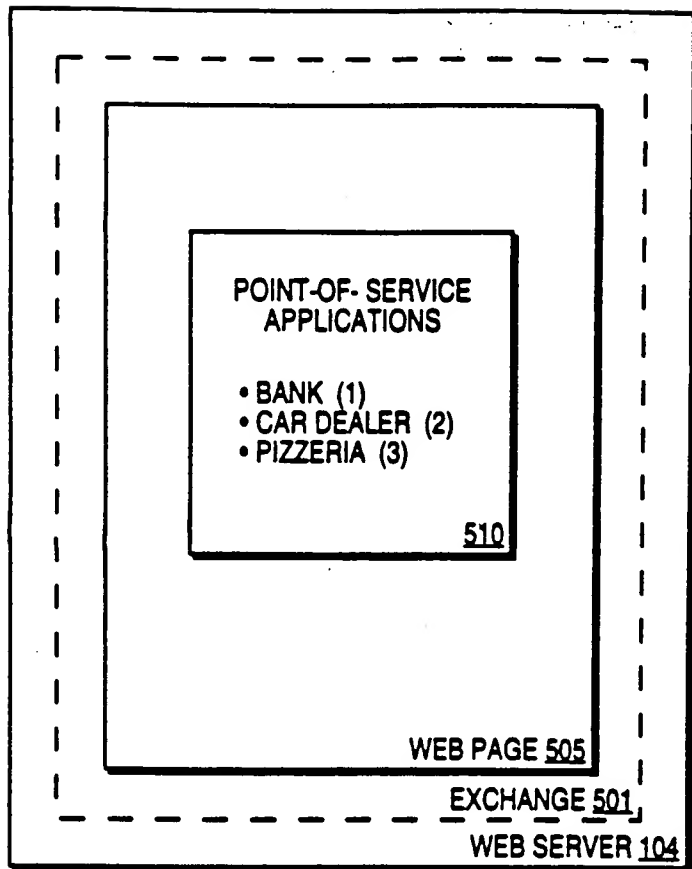


FIG. 5C

667243 20295250

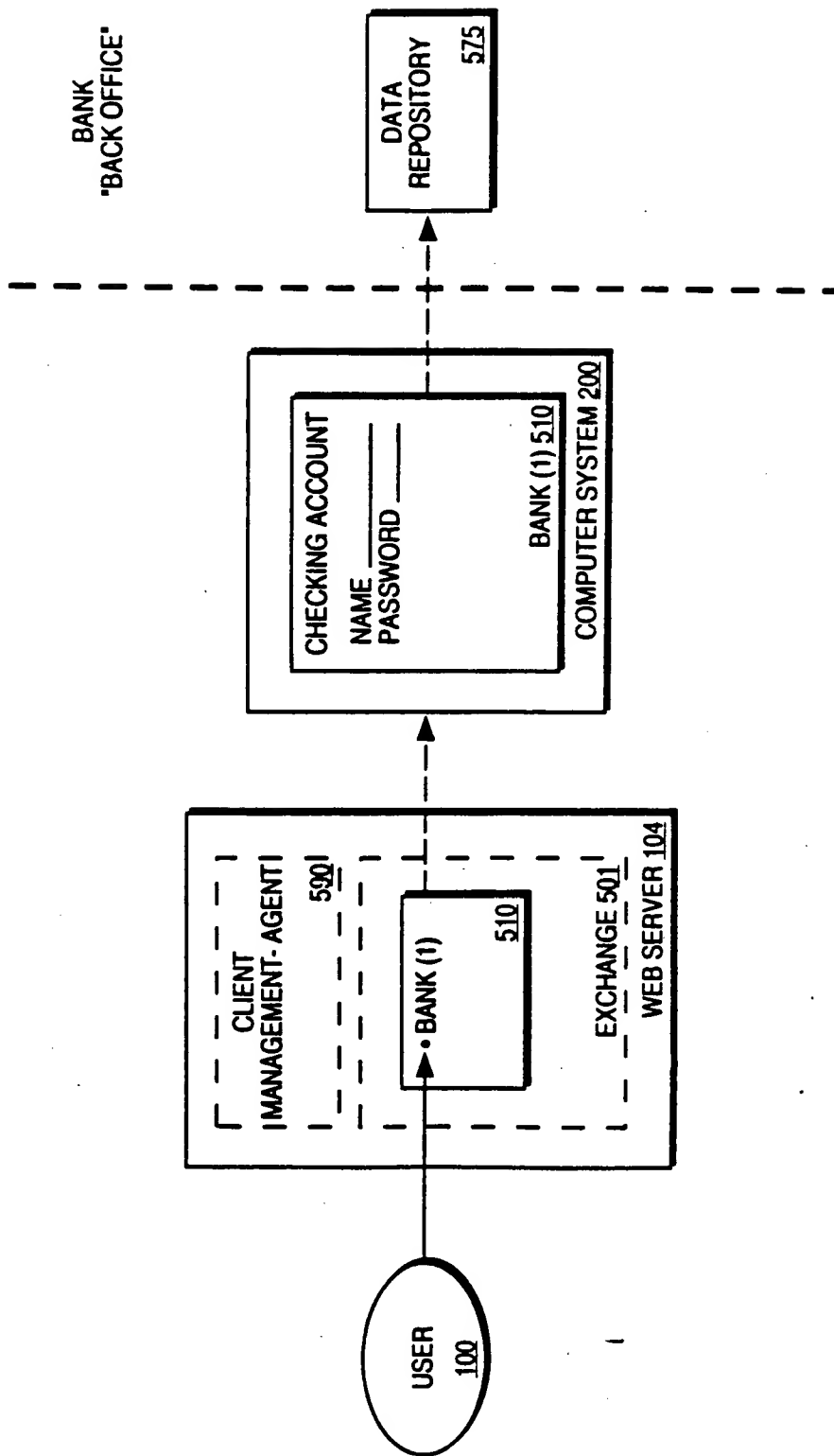


FIG. 5D


```
graph TD; Bank["BANK  
WEB PAGE 104"] --> Dealer["CAR DEALER  
WEB PAGE 560"]; Dealer --> User(("USER 100")); User --> Bank;
```

FIG. 5E

03295207, 0421499

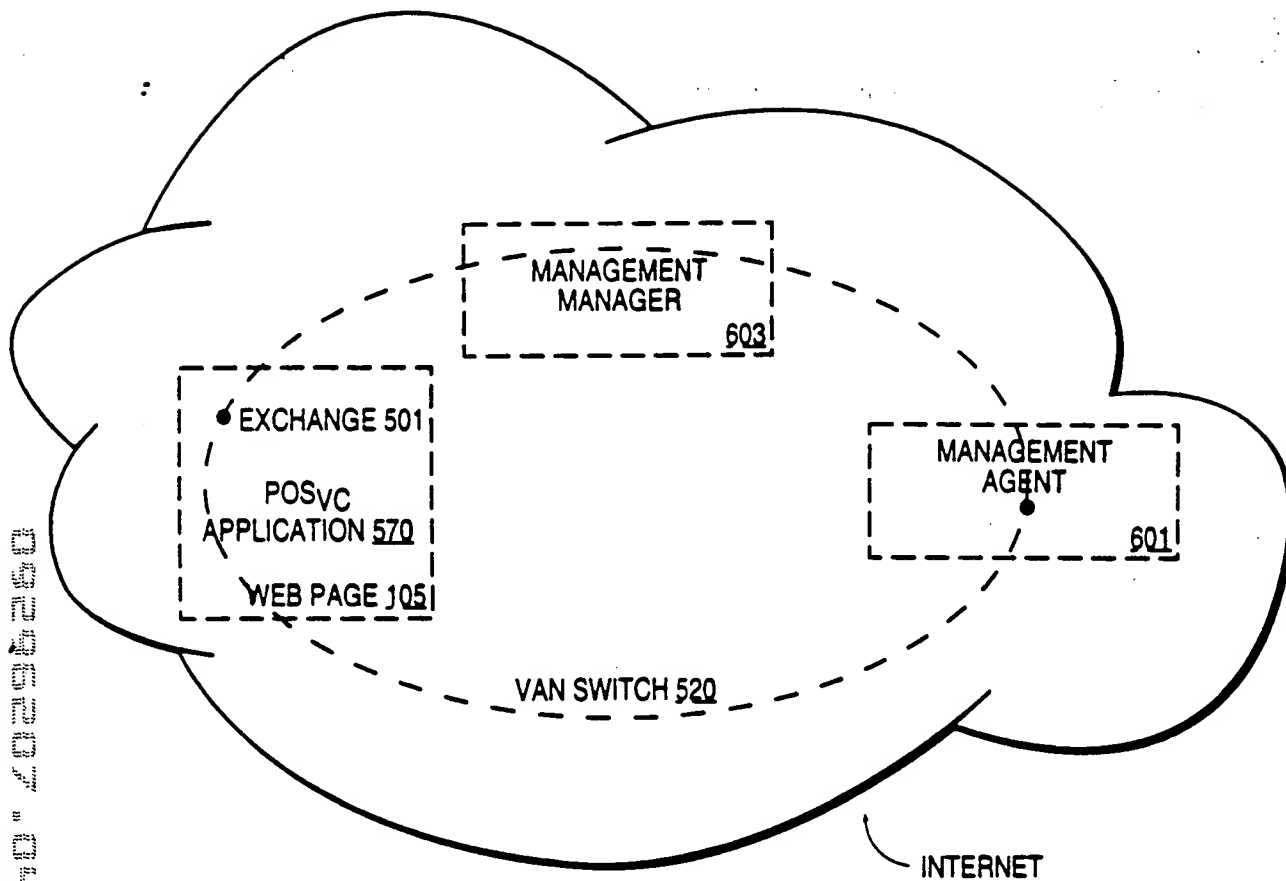


FIG. 6A

05296207.042499

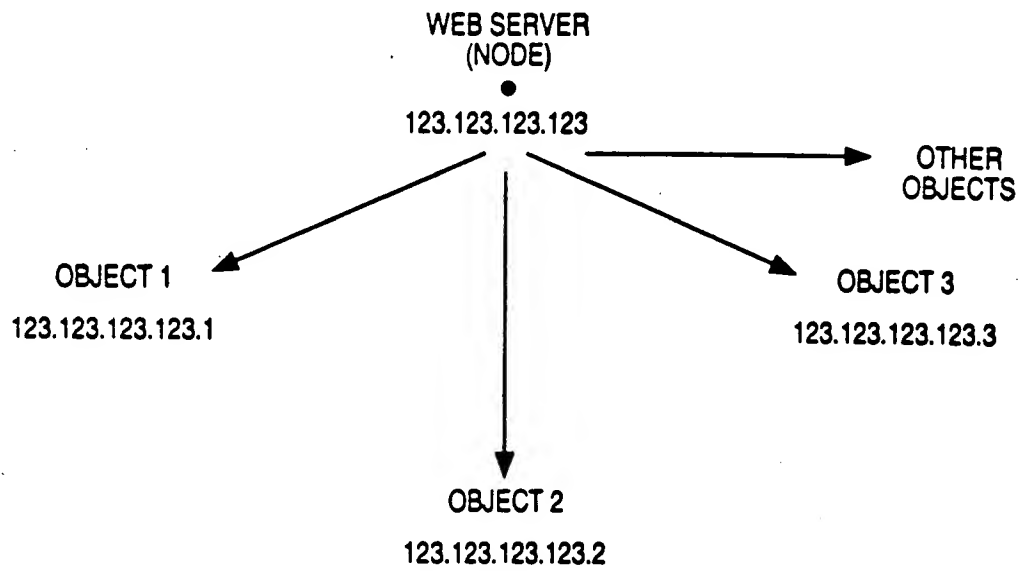
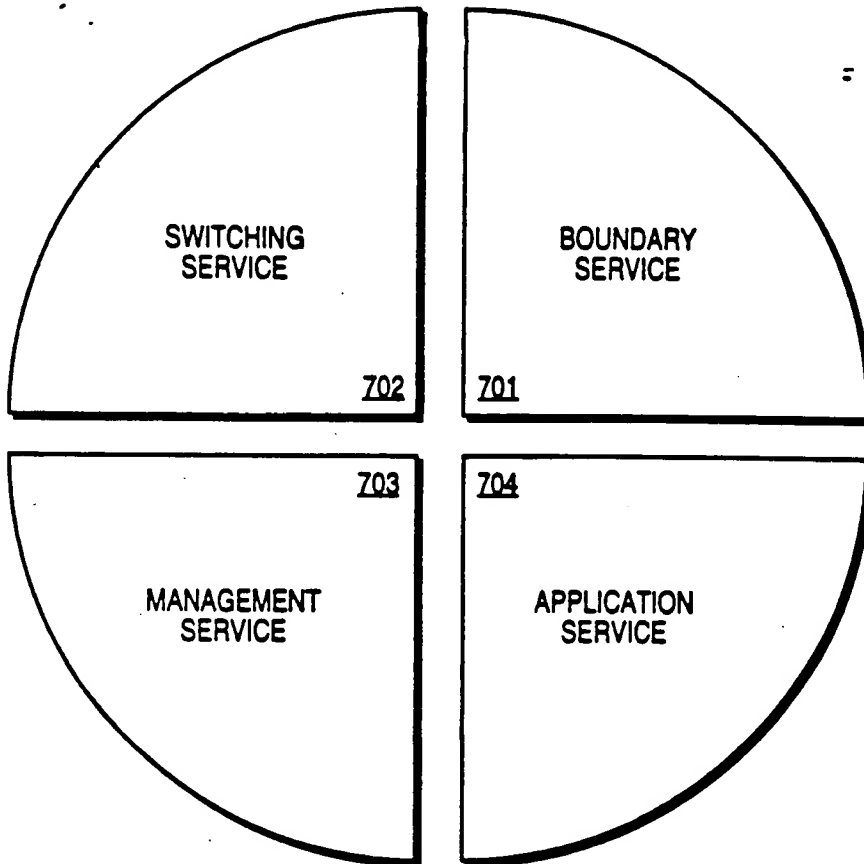


FIG. 6B

VAN SWITCH 520



09296207, 042199

FIG. 7

BEGIN

USER CONNECTS TO WEB SERVER
RUNNING AN EXCHANGE

802

USER ISSUES REQUEST FOR
TRANSACTIONAL APPLICATION

804

WEB SERVER HANDS OFF
REQUEST TO EXCHANGE

806

EXCHANGE ACTIVATES GRAPHICAL USER
INTERFACE TO PRESENT USER WITH LAST
OF POS_{VC} APPLICATION OPTIONS

808

USER MAKES REQUEST FROM
POS_{VC} APPLICATION LIST

810

SWITCHING COMPONENT IN EXCHANGE
SWITCHES USER TO
SELECTED POS_{VC} APPLICATION

812

OBJECT ROUTING COMPONENT
EXECUTES USER'S REQUEST

814

DATA RETRIEVED FROM DATA
REPOSITORY VIA TMP

816

USER CONTINUES TRANSACTION
(OPTIONAL) OR ENDS TRANSACTION

818

END

09296207.042499

FIG. 8

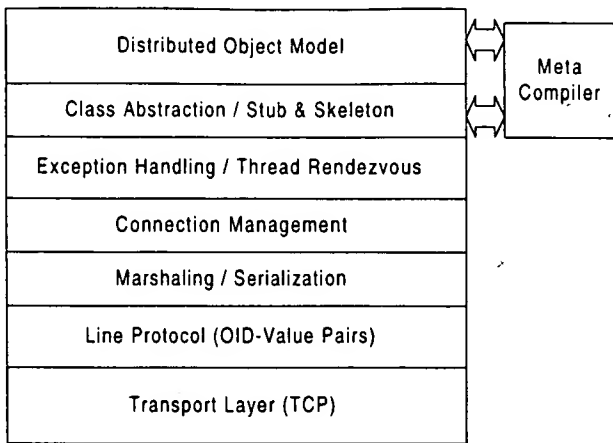


Figure 9: Software Layers of the Object Router

09296207.042499
ESTD 709250

09256207.042199

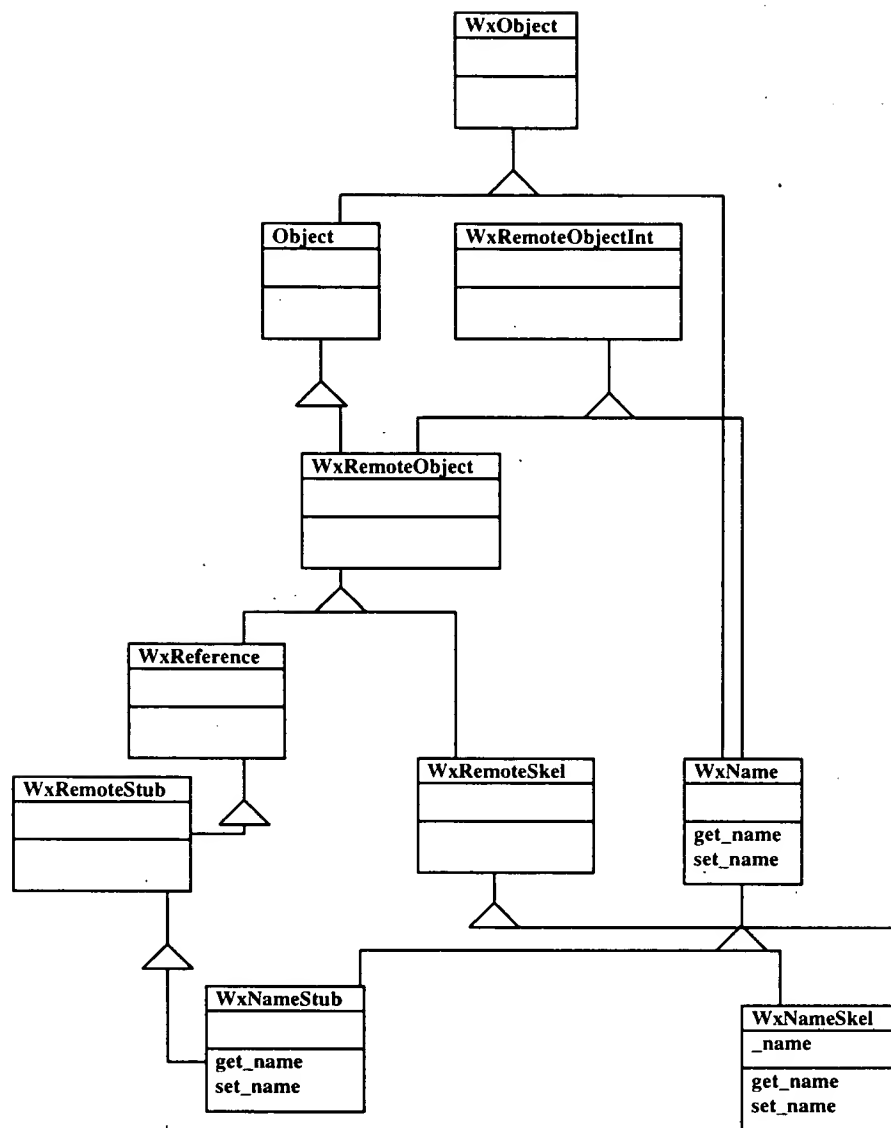


Figure 10: Data Model Integration

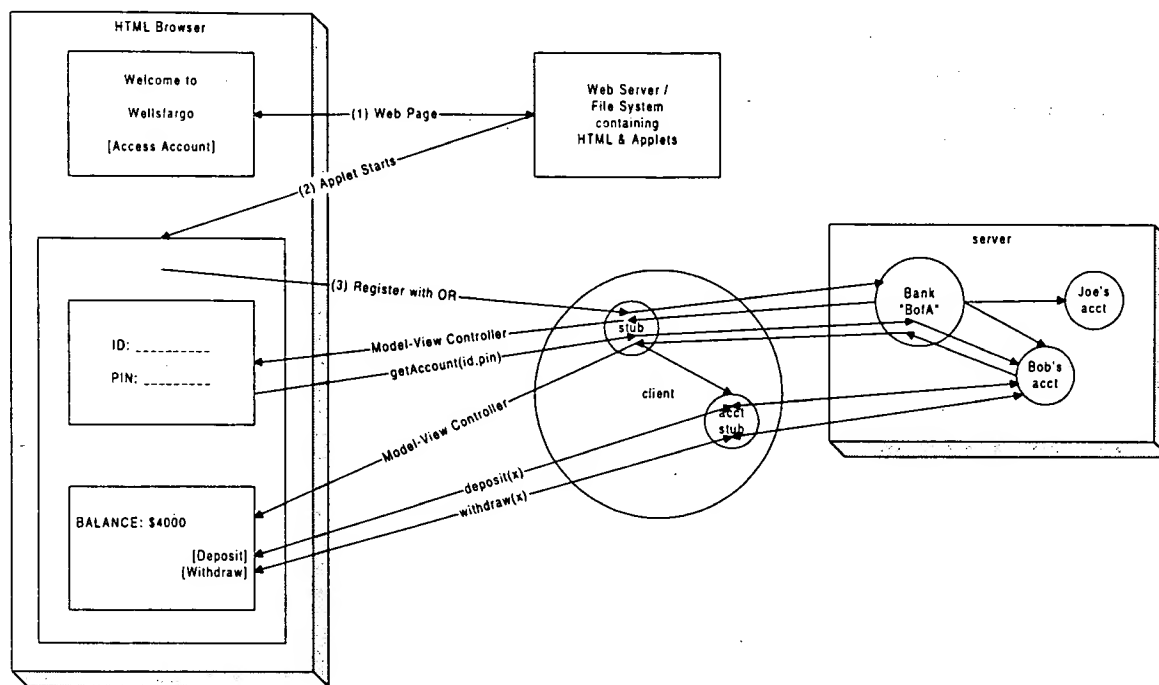


Figure 11: Bank Scenario

00296207 042499

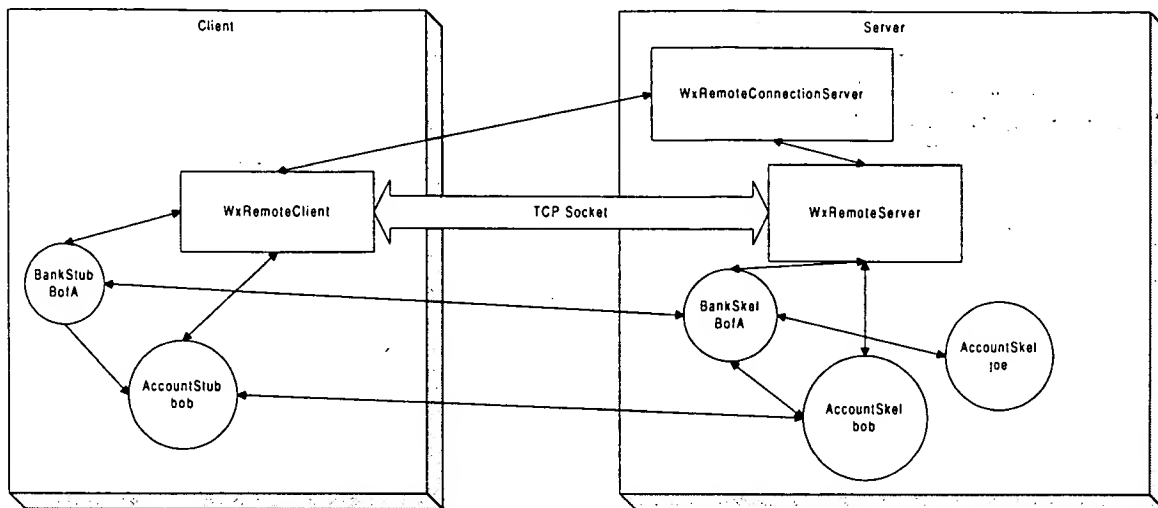


Figure 12: Bank Client-Server

00296207 "042459

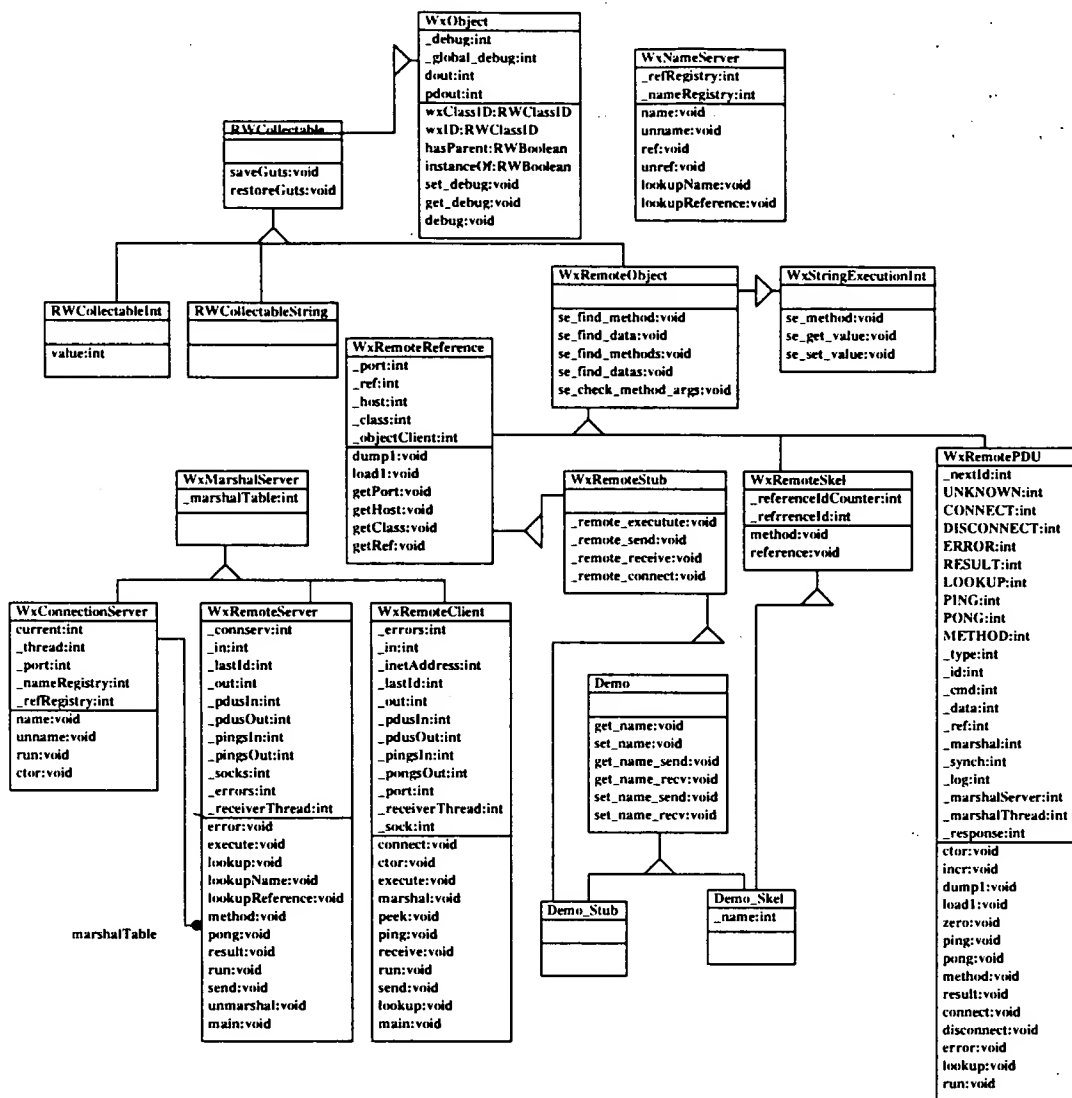


Figure 13: Class Diagram

```

sequenceDiagram
    participant client_main as client main
    participant xyz_stub as xyz stub
    participant Remote_Client as Remote Client
    participant Wx_Remote_PDU as Wx Remote PDU
    participant Remote_Connection_Monitor as Remote Connection Monitor
    participant Wx_Remote_Connection_Server as Wx Remote Connection Server
    participant Wx_Remote_Server as Wx Remote Server
    participant Wx_Remote_PDU_2 as Wx Remote PDU
    participant xyz_skel as xyz skel
    participant server_main as server main

    client_main->>Remote_Client: ctor
    client_main->>Remote_Client: client()
    Remote_Client->>Remote_Connection_Monitor: ctor
    Remote_Client->>Remote_Connection_Monitor: runStart()
    Remote_Client->>Remote_Connection_Monitor: connect
    Remote_Connection_Monitor->>Wx_Remote_Connection_Server: tcp open
    Wx_Remote_Connection_Server->>Wx_Remote_Server: ctor/runStart
    Wx_Remote_Server->>Wx_Remote_PDU_2: ctor
    Wx_Remote_Server->>Wx_Remote_PDU_2: lookup
    Wx_Remote_PDU_2->>xyz_skel: referenceId
    xyz_skel->>server_main: name
    server_main->>xyz_skel: dtor
    xyz_skel->>Wx_Remote_PDU_2: dtor
    Wx_Remote_PDU_2->>Wx_Remote_Server: dtor
    Wx_Remote_Server->>Wx_Remote_Connection_Server: dtor
    Wx_Remote_Connection_Server->>Remote_Connection_Monitor: dtor
    Remote_Connection_Monitor->>Remote_Client: dtor
    Remote_Client->>xyz_stub: dtor
    xyz_stub->>client_main: dtor

    client_main->>Remote_Client: lookup("root")
    Remote_Client->>Wx_Remote_PDU: ctor/lookup
    Wx_Remote_PDU->>Remote_Connection_Monitor: write
    Remote_Connection_Monitor->>Wx_Remote_Connection_Server: write
    Wx_Remote_Connection_Server->>Wx_Remote_Server: write
    Wx_Remote_Server->>Wx_Remote_PDU_2: ctor
    Wx_Remote_Server->>Wx_Remote_PDU_2: lookup
    Wx_Remote_PDU_2->>xyz_skel: referenceId
    xyz_skel->>server_main: name
    server_main->>xyz_skel: dtor
    xyz_skel->>Wx_Remote_PDU_2: dtor
    Wx_Remote_PDU_2->>Wx_Remote_Server: dtor
    Wx_Remote_Server->>Wx_Remote_Connection_Server: dtor
    Wx_Remote_Connection_Server->>Remote_Connection_Monitor: dtor
    Remote_Connection_Monitor->>Remote_Client: dtor
    Remote_Client->>xyz_stub: dtor
    xyz_stub->>client_main: dtor

    client_main->>Remote_Client: get_name
    Remote_Client->>xyz_stub: send
    xyz_stub->>Remote_Client: recv
    Remote_Client->>Wx_Remote_PDU: ctor
    Wx_Remote_PDU->>Remote_Connection_Monitor: write
    Remote_Connection_Monitor->>Wx_Remote_Connection_Server: write
    Wx_Remote_Connection_Server->>Wx_Remote_Server: write
    Wx_Remote_Server->>Wx_Remote_PDU_2: ctor
    Wx_Remote_Server->>Wx_Remote_PDU_2: run
    Wx_Remote_PDU_2->>xyz_skel: ex
    xyz_skel->>server_main: se_method
    server_main->>xyz_skel: unmarshal
    xyz_skel->>Wx_Remote_PDU_2: unmarshal
    Wx_Remote_PDU_2->>Wx_Remote_Server: dtor
    Wx_Remote_Server->>Wx_Remote_Connection_Server: dtor
    Wx_Remote_Connection_Server->>Remote_Connection_Monitor: dtor
    Remote_Connection_Monitor->>Remote_Client: dtor
    Remote_Client->>xyz_stub: dtor
    xyz_stub->>client_main: dtor
  
```

Figure 14: Object Router Timing Diagram

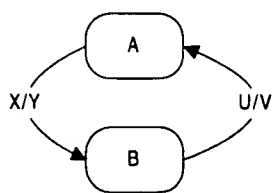


Figure 15: A Finite State Machine

09296207 042494

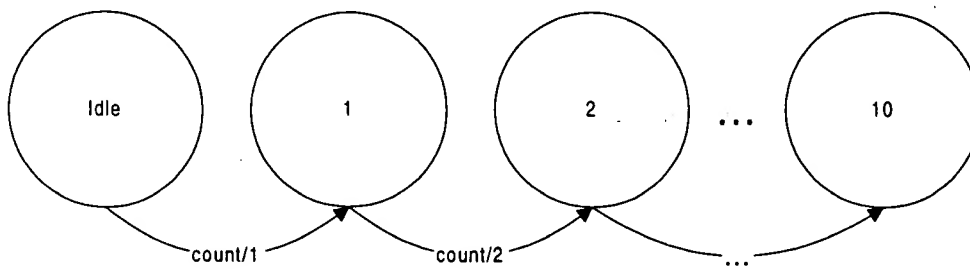


Figure 16: Counter implemented with FSM

09295207 042459

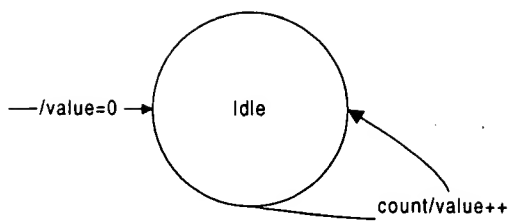


Figure 17: Counter implemented with DOLSIB

09296207 042499
557240 2029620

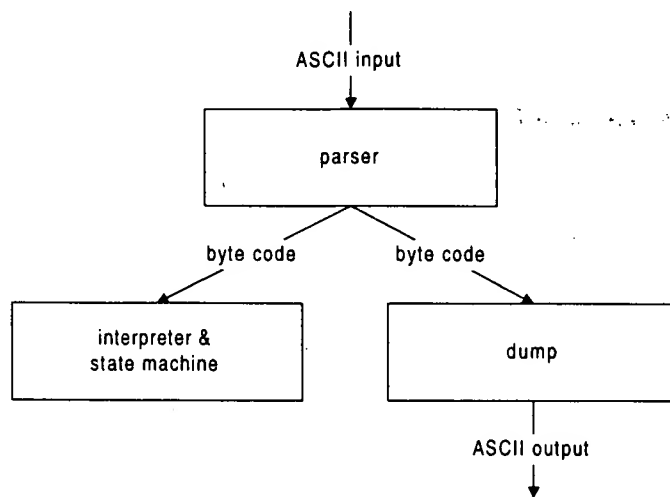


Figure 18: State Machine files and programs

00205207.042159

```

beginclass CoreBusinessObject
begindata
enddata

beginmethod
include hskel
private:
# used by the Finite State Machine
virtual void fsm_init() { }
void fsm_action_timeout(const char* timeval);
void fsm_action_throw(const char* message);
void fsm_action_return(const char* result);
void fsm_action_send(const char* value);
public:
endinclude

# to configure the FSM
method void fsm_load_dolsib {String filename}
# to trigger an event in the FSM
method void fsm_event {String name} {String value}
method String fsm_result
# to set/get variables from FSM
method void fsm_set_string {String name} {String value}
method const String fsm_get_string {String name}
method void fsm_set_integer {String name} {int value}
method const int fsm_get_integer {String name}
endmethod

endclass

```

Figure 19: CoreBusinessObject Object Router Description

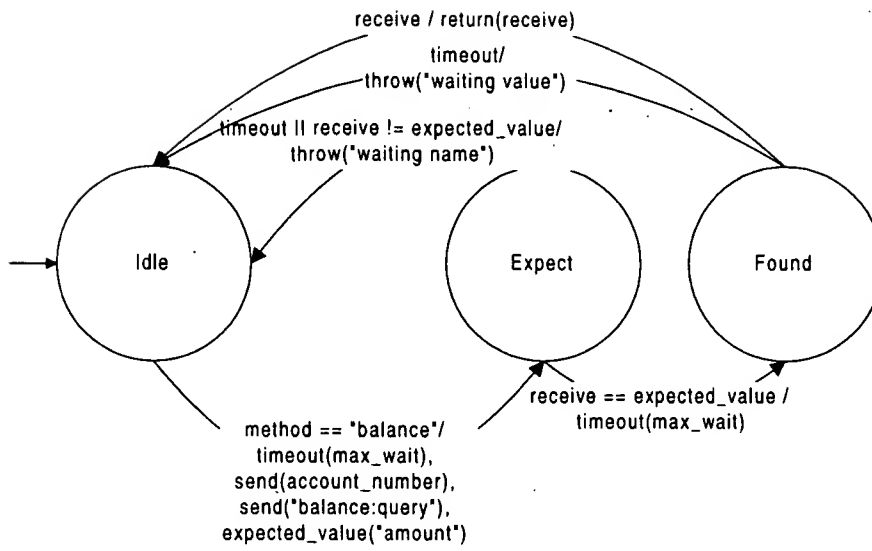


Figure20: Bank B1 DOLSIB FSM Diagram for Balance

092506207 042499

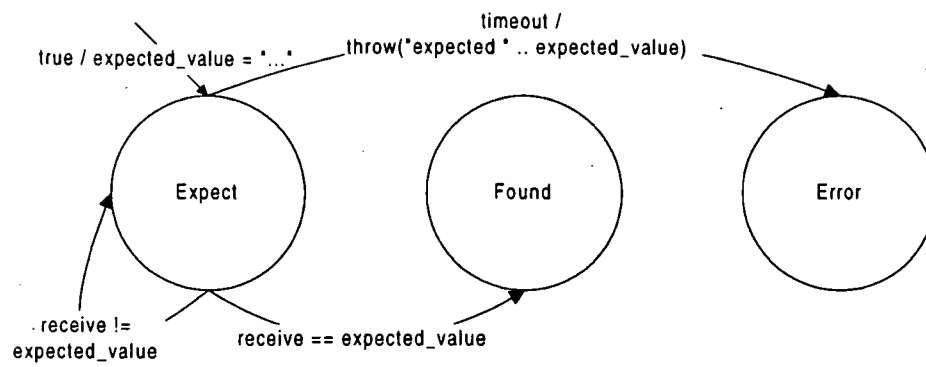


Figure21: Expect, Found and Error states

03296207 "0421.99
657240/2086260

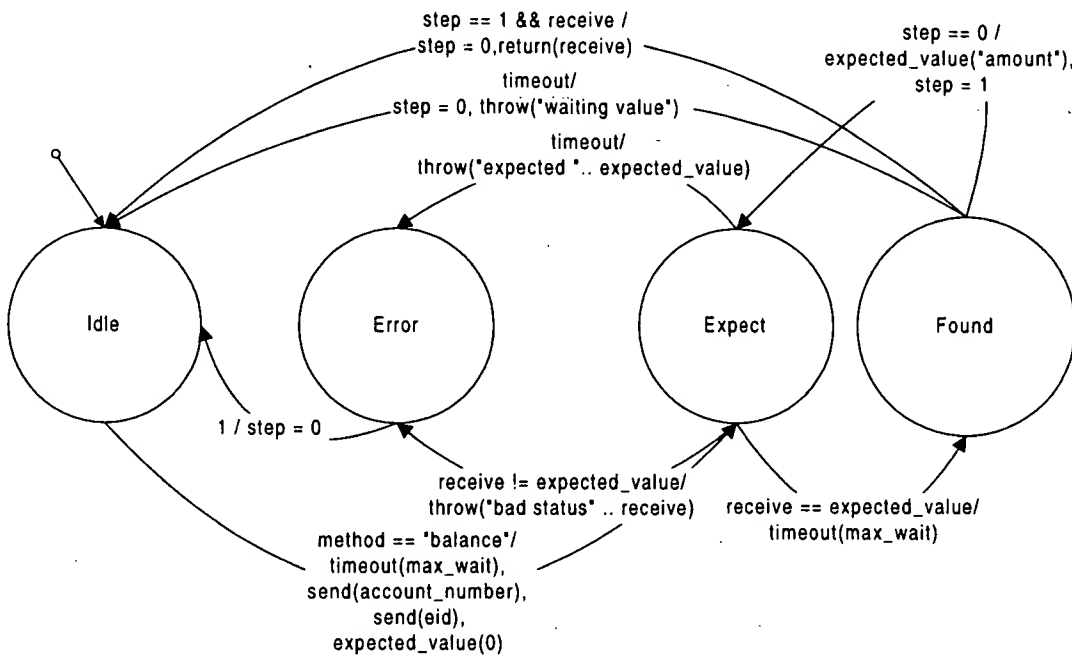


Figure 22: Bank B2 DOLSIB FSM Diagram for Balance

09296207.042159